

Notice of Allowability

Application No.

09/895,077

Examiner

Brian Goddard

Applicant(s)

JOHNSON ET AL.

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed 05 October 2005.
2. ☒ The allowed claim(s) is/are 1,2,5-11,13-17,19-22,25-29,31-33,37,38,41-47 and 49-53.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SAFET METJARIĆ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. John Mulcahy on 16 December 2005.

The application has been amended as follows:

- **Claim 18** has been **Canceled**.
- **Claims 7, 9, 10, 16, 19, 45 and 46** have been **Amended** as follows:

7. (Currently Amended) The method of claim 6, further comprising:
for each new class instance and corresponding new association class instance
that reference the new class instance that is created:

- (iii) creating a new first level wrapper level-table including a pointer to a new second level wrapper table associated with the association class; and
- (iv) creating a pointer in the new second level wrapper table that references the new instance of the association class.

9. (Currently Amended) A method for maintaining reverse links in an object-oriented environment including instances, association classes and association class instances, the method comprising:

for each class instance associated with N association ~~class~~-classes that each ~~includes~~-include at least one association class instance that references the class instance, wherein N represents an integer value greater than or equal to one:

creating a first level wrapper table including N pointers to N second level wrapper tables associated with the association classes.

10. (Currently Amended) A method for maintaining reverse links in a object-oriented environment including class instances and associations, the method comprising:

for each class instance associated with N instances of a first association class that each reference the class instance, and X instances of a second association class that each reference the class instance, wherein N and X represent integer values greater than or equal to one:

(i) creating a first level wrapper table including:

a first pointer to a second level wrapper table associated with the first association class, and

a second pointer to a second level wrapper table associated with the second association class;

(ii) creating N pointers, in the second ~~table~~level wrapper table associated with the first association class, that each reference an individual instance of the first association class; and

(iii) creating X pointers, in the second ~~table~~-level wrapper table associated with the second association class, that each reference an individual instance of the second association class.

16. (Currently Amended) In a system comprising a client and a server, a method for performing association traversals performed by the client, comprising:

generating a request for relationship information associated with a selected class instance; and

receiving a response including information reflecting a relationship between the selected class instance and other class instances that are referenced by the same association class instances, wherein the response [[was]] is generated using pointers defined in a table associated with the selected class instance that reference the common association class instances.

18. (Cancelled).

19. (Currently Amended) ~~The system of claim 18,~~ A system for performing association traversals, comprising:

a client for generating a request for information reflecting the relationship between selected objects defined in a repository; and

a server including:

the repository for storing objects, wherein a set of the objects are associated with object wrappers, and wherein the object wrapper associated with one object includes pointers to all association instances that reference the one object; and

an object manager for processing the request by using an object wrapper associated with one object of the selected objects.

45. (Currently Amended) A computer-readable medium including instructions for performing a method, when executed by a processor, for maintaining reverse links in a object-oriented environment including class instances and associations, the method comprising:

for each class instance associated with N association classes that each includes include at least one association class instance that references the class instance, wherein N represents an integer value greater than or equal to one:

creating a first level wrapper table including N pointers to N second level wrapper tables associated with the association classes.

46. (Currently Amended) A computer-readable medium including instructions for performing a method, when executed by a processor, for maintaining reverse links in a object-oriented environment including class instances and associations, the method comprising:

for each class instance associated with N instances of a first association class that each reference the class instance, and X instances of a second association class that each reference the class instance, wherein N and X represent integer values greater than or equal to one:

- (i) creating a first level wrapper table including:
 - a first pointer to a second level wrapper table associated with the first association class, and
 - a second pointer to a second level wrapper table associated with the second association class;
- (ii) creating N pointers, in the second ~~table~~level wrapper table associated with the first association class, that each reference an individual instance of the first association class; and
- (iii) creating X pointers, in the second ~~table~~-level wrapper table associated with the second association class, that each reference an individual instance of the second association class.

2. The following is an examiner's statement of reasons for allowance:

As shown in the Appeal Brief of 05 October 2005, Mitchell fails to teach or suggest creating a reverse link by defining a pointer in a first table...that references a second table and defining a pointer in a second table that references the instance of the association class, as recited in independent claim 1 (and others). Mitchell also fails to teach or suggest similar subject matter in the remaining independent claims, which each require a wrapper (or wrapper table) associated with an object/instance, the wrapper (or wrapper table) including pointers to each association instance that references that particular object/instance [or similar recitations].

None of the prior art of record, taken alone or in combination, provides sufficient disclosure to teach or suggest the subject matter of the claims as a whole, particularly those elements as described above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goddard whose telephone number is 571-272-4020. The examiner can normally be reached on M-F, 9 AM - 5 PM.

Art Unit: 2161

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bdg
16 December 2005


SAFET METJAHIC
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100